



State of New Hampshire
Department of Health and Human Services
Division of Public Health Services



Larvicides

What are larvicides?

Larvicides are chemicals or natural bacteria that can be applied to kill mosquito larvae.

What are larvae?

Larvae are one of the four forms in a mosquito's development. Adult female mosquitoes lay eggs, which hatch into larvae. Larvae then become pupae, from which the adult mosquitoes emerge. Adult mosquitoes lay their eggs on the surface of standing water and the larvae then develop into pupae in the water.

In what form are larvicides used?

Larvicides can be applied to standing water as liquid, a spray, or granules. Some formulations release a concentrated larvicide slowly over weeks to months and they are useful in catch basins (storm drains) in which standing water has developed. These products will be placed into the storm drains by hand. For other types of standing water, granules or liquid products may be applied either by hand, or sprayed from backpacks or trucks.

Are larvicides any better at killing mosquitoes than pesticides that attack adult mosquitoes (adulticides)?

Larvicides are more effective at controlling mosquitoes because they kill mosquitoes before they become adults and disperse.

What types of larvicides will be used to combat the spread of mosquitoes with the West Nile Virus?

Common larvicides include Altosid (Methoprene), VECTOLEX (Bacillus sphaericus), and VECTOBAC (Bacillus thuringiensis israelensis). These products have been approved for mosquito control by the United States Environmental Protection Agency (U.S. EPA). Altosid mimics an insect growth hormone and prevents the development of adult mosquitoes from pupae. VECTOLEX and VECTOBAC contain a bacteria that can damage the gut of the mosquito larvae that feed on them, causing the larvae to starve to death. All three have been found to be highly effective in mosquito control. The New Hampshire Department of Health and Human Services has created fact sheets with information on each of these larvicides.

When will these larvicides be used for mosquito control?

Depending on the location in New Hampshire and conditions that determine the risk for West Nile virus transmission, initial application of the larvicides will take place during the last two weeks of April and through mid-May of any given year. Follow-up applications will take place periodically afterward, and after heavy rains. Some areas will not receive persistent larvicide applications to protect sensitive aquatic and wildlife.

If we use larvicides for mosquito control now, does that mean the use of pesticides for adult mosquitoes won't be needed later on?

The use of larvicides is part of the first line of defense against mosquitoes carrying the West Nile virus. A preventive approach also includes encouraging residents to eliminate standing water areas around residences where mosquitoes breed and placing fish that eat mosquito larvae in some areas. In the event of a public health threat, reducing the adult population of mosquitoes with EPA-approved pesticides will be done when necessary to prevent or address the potential for illness in humans.

Am I likely to be exposed to these larvicides?

No. The larvicides are being applied in storm drains, catch basins, and other areas to which the general public does not have access. Larvicides will not be applied in areas that drain into waters consumed by humans.

What problems could I have if I am exposed to these larvicides?

Altosid, as well as VECTOLEX and VECTOBAC, can cause mild eye and skin irritation, but mostly through direct contact with highly concentrated forms of these agents. The application of these products is done in areas inaccessible to the public and at low concentrations.

What should I do if I am exposed to these larvicides?

If you experience eye or skin irritation as a result of exposure to a larvicide, rinse the eyes with tap water for 20 minutes and wash the skin thoroughly with soap and water. If the symptoms persist, first contact your local doctor or emergency department, then contact the New Hampshire Poison Control Center at 1-800-222-1222.

For more information about potential health effects from exposure to pesticides, such as VECTOBAC, VECTOLEX, and Altosid, please call the NH Department of Health and Human Services, Environmental and Occupational Health Section at 1-800-852-3345, extension 4664, or 1-603-271-4664.

For more information about West Nile virus, call the New Hampshire Department of Health and Human Services, West Nile Virus Information line 1-866-273-NILE (6453)